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**THE GREENING OF THE ECONOMY:
REPERCUSSIONS ON FINANCIAL SERVICES**

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September 1992



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THE GREENING OF THE ECONOMY: REPERCUSSIONS ON FINANCIAL SERVICES

INTRODUCTION

Public discussion about environmental issues has until recently focused on the primary and secondary sectors. The tertiary sector, and more specifically the financial services industry, has been ignored. This is clearly unwarranted.

In this paper, after briefly summarizing the evolution of environmental concerns in Canada over the past 20 years and examining the initial reactions to that evolution, we shall address the likely effect of these new values on the financial services industry.

EVOLUTION OF THE SITUATION OVER THE PAST 20 YEARS

A. Emergence of Environmental Concerns

Over the past 20 years, "green thinking" has changed very little. On the other hand, during that period the acuteness of environmental problems and public attitudes have changed and evolved profoundly, so that a statement that would have had no credibility in 1970 is well received today--even if it deals with the same issues in the same terms.

At the Parliamentary Forum on Global Climate Change, held in Ottawa on 23 and 24 April 1990, Alain Giguère, president of the *Centre de recherches sur l'opinion publique* (CROP), a polling company, pointed out that opinions on the environment had changed a great deal over the years.⁽¹⁾ For example, in the 1970s a vast majority of Canadians said they were

(1) House of Commons, *Parliamentary Forum on Global Climate Change*, Special Issue, Ottawa, April 23-24, 1990, p. 6-9.

concerned about inflation, while concern about the environment was limited to fringe protest groups. Society was deaf to the environmental movement. In the early 1980s, unemployment was Canadians' main concern.

In the strong period of economic growth in Canada in the mid-1980s consumers became increasingly critical and demanding. In a context of plenty, where everything was permissible and money was no object, the quality of the environment, a by-product of modern industrial society, came under scrutiny. In the late 1980s, Canadians said that the environment was one of their main concerns. According to a CROP survey published in June 1989, 85 % of Canadians stated that they were prepared to pay more for environmentally friendly products. At the same time, people began to focus on the quality of life. In addition, according to the CROP survey, 88% of Canadians said they felt that public health was affected by pollution, 73% of respondents stated that pollution was a major cause of cancer, and 81% considered that pollution problems threatened the survival of the human race.

At the Parliamentary Forum, Giguère noted that a "new emotional connection with the planet" and increasing insecurity were possible factors explaining the change in attitude over the years. The media contributed a great deal to the dawn of new values by regularly reporting on environmental disasters, such as the fire in a PCB warehouse in Saint-Basile-le-Grand in Quebec, the fires at tire depots in Hagersville, Ontario and Saint-Amable, Quebec and the Exxon Valdez oil spill in Alaska, and on the slow degradation of the natural environment shown in farmland erosion, the thinning ozone layer, the greenhouse effect and the destruction of the Amazon forest, for example.

B. Initial Reaction of the Financial Services Industry

Faced with the emergence of these new social values and in order to enhance their image, financial institutions reacted to environmental concerns in the late 1980s by offering so-called environmentally friendly products such as forms and annual reports printed on recycled paper, credit cards affiliated with environmental protection organizations and mutual funds composed of securities issued by environmentally friendly companies, as well as by associating themselves with environmental protection organizations or matching their clients' donations to such organizations.

At that time, life was relatively simple for banks: they could easily adapt to the green movement. As good corporate citizens, banks and other financial institutions also announced the adoption of codes of ethics and the creation of ambitious recycling and waste reduction programs. Green innovation was easy.

However, the early 1990s brought many changes. Canadians experienced the GST, the Gulf War, the worst recession since 1929, an unprecedented rate of unemployment, and mushrooming welfare rolls, not to mention interminable constitutional problems. In a way, environmental concerns were submerged, but not eliminated, by all these political and economic events. The priority the public assigns to environmental concerns is affected by economic and political fluctuations. The quality of the environment will certainly come back to the top of the list of political, economic and social concerns in the not-too-distant future.

Nonetheless, the federal and provincial governments have begun to react to the emergence of new values. Increasingly, they realize that the neo-classic economic vision, the very vision that governs our economies by giving free rein to market forces, does not take into account the environmental consequences of economic activities. In evaluating the cost of production, polluting industries do not include the social cost of pollution, since air, water and other planetary resources are public assets, provided free to producers, with no market price. The price of these inputs is invisible, so producers will use the number of units of water, land and air they need to maximize their profits, regardless of the social cost of the resulting pollution. Only the private cost is of interest to industries.

A number of years ago, governments decided to intervene so that the social cost of pollution would be included in the private cost calculated by producers. The quantity and the extent of environmental protection legislation in Canada have risen considerably. At present, there are 13 federal and 70 provincial environmental protection statutes.⁽²⁾

Banks and other lending institutions, as well as insurance companies, will have no choice but to adjust to a legislative framework that will be increasingly restrictive. They will be affected by a new economic order that, from now on, will be closely tied to environmental

(2) Carol Charbonneau, "Précautions à prendre pour réduire les responsabilités environnementales des prêteurs" ["Precautions for Reducing Lenders' Environmental Liability"], *Le banquier*, Volume 19, Number 3, May/June 1992, p. 20-29.

risks.⁽³⁾ Environmental risks and the sharing of environmental liability are major challenges that the world of finance must face as this millennium comes to a close. Necessarily, then, the greening of the world of finance will become more complicated. Financial institutions will be called upon to go well beyond green credit cards, mutual funds composed of securities issued by environmentally friendly companies, and recycling programs.

FINANCIAL INSTITUTIONS AND THE ENVIRONMENT

Since markets are becoming more global, major challenges are arising that the world of finance must meet, starting now. One thing this industry, particularly the financial and insurance sectors, will have to do is to include environmental concerns in its decision-making and risk-evaluating models. For example, in order to survive without jeopardizing their economic soundness, financial institutions must clearly establish the environmental risks in their portfolios as well as each borrower's financial ability to pay potential cleanup costs.

Will the new way of doing business imposed by environmental regulations limit access to capital? Will limiting the mobility and accessibility of capital for environmental reasons harm Canada's economic development? Will Canada's relative position in the now-unified world market thus be jeopardized? If environmental values are to take precedence over economic and commercial values, is there not a danger of limiting Canada's ability to compete with its trading partners on the world market? Canada is particularly vulnerable on all these fronts because of its industrial structure; for example, the pulp and paper industry, the petrochemical products industry, and steel and aluminum mills are all natural resource-intensive industries with high environmental risks.

(3) In 1989 the regulatory activities bureau of the Federal Home Loan Bank System in the United States established eight types of environmental risks associated with contaminated sites that must be included in financial risk evaluations made by financial institutions.

A. Transfer of Liability

The Canadian Bankers' Association (CBA) has begun to react to these questions, expressing concern that "environmental protection law in Canada punishes the innocent as well as the guilty."⁽⁴⁾

The example of the Love Canal in the United States illustrates the transfer of environmental liability. Throughout World War II and into the early 1950s, the Hooker Chemical Company buried thousands of drums containing toxic wastes in a site not far from the Love Canal in northern New York State. In the late 1960s, the Occidental Chemical Corporation acquired Hooker. Some 20 years later, the drums had corroded and toxic gases began to rise to the surface. Today, Occidental Chemical could have to spend \$260 million in cleanup costs. So far, Occidental's management has taken the position that the company is being accused of a crime it did not commit.

This type of environmental disaster raises several questions for lending institutions and insurance companies. Who is liable for what? Who should pay for cleaning up? If, for example, Occidental declared bankruptcy because it could not pay cleanup costs, would the institutions financing Occidental be held liable for the cleanup? The CBA responds to this type of hypothetical question by pointing to three major problems.⁽⁵⁾

The first problem is the extent of liability. Canadian laws usually provide that entities that damage the environment or that allow it to be damaged are liable for the damage caused. Under section 36 of the *Canadian Environmental Protection Act*, for example, the person liable is the person who owns the substance, has charge of it immediately before its initial release into the environment, or causes, contributes to, or increases the likelihood of the initial release. In Quebec, section 115.1 of the *Environment Quality Act* gives the Ministère de l'Environnement the power to require that an entity that simply has custody of or control over the contaminant should remove it, even if that entity is not responsible for the pollution. In

(4) Canadian Bankers' Association, *Sustainable Capital: The Effects of Environmental Liability in Canada on Borrowers, Lenders and Investors*, November 1991, p. 1.

(5) *Ibid.*, p. 2-3.

Ontario, the *Environmental Protection Act* is also very explicit about who is liable: the owner of the source of pollution, or the person occupying the contaminated site, or the person in charge, management or control of it. Thus the financial institution controlling the polluting assets of a business that had gone bankrupt would be held liable for the pollution.

The second problem is responsibility for cleaning up. For example, if a lending institution accepts as security a property that turns out to be polluted, has control of that property and has some right of ownership over it, does the institution become responsible for cleaning the property?

The third problem is the impact of the problems previously mentioned. For example, a small loan made to allow a business to acquire an industrial site could end up costing a lending institution several million dollars if that site turned out to be polluted or became polluted.

B. New Organizational Culture

Lending institutions have committed themselves to lending billions of dollars without ever evaluating the environmental risks of those loans. At the end of 1991, non-mortgage loans to businesses, including public bodies, totalled \$94.9 billion. Loans to agricultural businesses exceeded \$7.4 billion; those to forest businesses, \$1.23 billion; and those to the mining, oil and gas sector, \$2.43 billion. Lending institutions could be called upon to pay for the cleanup of polluted sites belonging to businesses to which they had lent capital before the new environmental protection legislation came into force.

The example of the Montreal company Kemptec (a petro-chemical subsidiary of the former Lavallin firm) clearly illustrates the risks banks assume in this field. Kemptec declared bankruptcy in September 1991. Despite the \$64.7 million this company owed to the banks, the banks refused to seize its assets because of the environmental liability they entailed. The Toronto-Dominion Bank alone wrote off \$23.3 million.

Today's global environmental debt amounts to at least one trillion dollars, or \$1 X 10¹⁸.⁽⁶⁾ The financial risks could be unlimited. In the United States, the value of environmental risks is estimated at between \$26 and \$213 billion, depending on the scenario.⁽⁷⁾ Canadian industries face an environmental burden estimated at \$20 billion.⁽⁸⁾ The oil companies alone have earmarked at least \$2 billion to clean up former service stations. The mining industry will have to invest between \$3 and 6 billion.⁽⁹⁾

Financial institutions, then, will have to make adjustments in their portfolios. They will have to set up measures to evaluate environmental risk. They may refuse from now on to accept inventories of raw materials or certain capital assets or properties as securities. As well as raising interest rates to include a risk premium, lending institutions will now require finished goods or accounts receivable as securities, in order to minimize their environmental liability.

Businesses that consume many natural resources or process large quantities of raw materials, such as paper mills and the mining sector, or semi-finished products such as the petrochemical sector, will now likely have much more difficulty in finding financing on the risk capital market.

In fact, all businesses seeking financing, regardless of sector or size, will have to reassure lending institutions, for example, by proving that concrete environmental protection measures have been set up, that the site occupied is not polluted and that the bank's environmental risks are negligible.

In order to do so, businesses will have to adopt a new form of accounting that will indicate to lending institutions, and shareholders as well, whether natural resources are being properly managed. Under current accounting rules, environmental obligations cannot be based on concepts of ownership, since there is no contract explicitly setting out the rights and

(6) Dan Rubenstein, "Lessons of Love," *Opinions*, Volume 9, Number 3, Office of the Auditor General, Ottawa, p. 9-12.

(7) George A James, *Canadian Insurance*, Volume 96, April 1991, p. 14.

(8) John Lorinc, "The Reckoning," *Canadian Business*, Volume 65, Number 9, September 1992, p. 30.

(9) *Ibid.*, p. 32.

obligations of the parties concerned. "Green accounting" should make it possible to take natural capital--the earth, air and waterways, for example--into account. If a new accounting model is to be successfully introduced, it must be understood that natural capital belongs to all human beings, and that damaging these assets is, in fact, nothing less than incurring a debt that future generations will have to pay. By accepting the fact that resources are lent to the present generation and must not be exhausted by it, we would acknowledge that economic activities have harmful effects on the natural environment. From this perspective, accounting would cover much more than a business alone; it would extend to the environment in which economic activity takes place.

As well as adopting a new accounting system, banks and other lending institutions will now require, for the duration of their financial relation with the borrower, ongoing and reliable information not only on financial risks as they are traditionally perceived, but also on environmental risks; otherwise, as the custodians of certain assets, these institutions could well be held liable for any pollution they cause.

These adjustments will affect not only lending institutions, governments witnessing businesses' diminished financing and competitive capacity, and borrowers who will have to disclose information now kept confidential and secret; they will also affect the insurance market. Many enterprises will certainly try to insure themselves against environmental risk, and lending institutions could well require businesses with high environmental risks to carry environmental damage insurance.

The insurance industry has begun to react to this need for coverage; for example, in February 1991, the Insurance Bureau of Canada issued a statement of principle on environmental issues.⁽¹⁰⁾ Businesses with high environmental risks will be able to obtain insurance against these risks, provided they submit an independent evaluation of accident prevention measures and provided these measures remain in place for the duration of coverage. In fact, the Insurance Bureau of Canada goes farther, by recommending that its members refuse to insure the environmental risks of businesses that pollute in excess of accepted standards. By means of this statement of principle, the insurance companies are committing themselves to preventing environmental damage rather than repairing it.

(10) Jack Lyndon, *Canadian Insurance*, Volume 96, April 1991, p. 8-9.

At present, environmental risk insurance is difficult to obtain on the market, though some companies, such as the American International Group, Ian Elliot Reliance, and the Pollution Liability Association, do offer environmental damage coverage.⁽¹¹⁾ However, since current legislation does a poor job of sharing liability and since it is difficult to evaluate the risk of accidents, insurers hesitate to venture into this market—even though it could prove quite lucrative. In time, businesses will probably have no choice but to disclose the information that insurance companies require to better evaluate risks.

CONCLUSION

The entire organizational culture of businesses, Canadian lending institutions and insurance companies must adjust to environmental reality. If they are to reassure depositors and shareholders and maintain their relative position in the financial services market, lending institutions and insurance companies will all have to be careful where the environment is concerned. The stakes could be enormously high.

Perhaps governments should reevaluate the complete and unlimited transfer of liability from polluters to lending institutions, or at least eliminate the present confusion. Otherwise, polluting industries will probably have difficulty finding risk capital unless they pay exceptionally high prices. Perhaps liability for environmental damage should be limited to the polluters (in accordance with the polluter-pays principle). These considerations are all the more important in a context of constantly changing environmental standards. An investment considered acceptable by a given standard today might no longer be acceptable tomorrow, if a stricter standard has been adopted.

The federal and provincial governments must recognize that imposing environmental liability on lending institutions will most likely harm the country's economic development by limiting the mobility and formation of capital.

Legislation in the United States has included exceptions to lender liability in case of environmental disaster. As a result, the definition of who controls a polluting business is

(11) *Ibid.*, p. 9.

much more limited there than it is in Canada. Nevertheless, according to the Petroleum Marketers Association, United States lenders have refused one-third of applications for loans to finance underground stockpiling operations, with the vast majority of those refusals being motivated by fears about environmental liability.⁽¹²⁾ Although the Superfund in the United States⁽¹³⁾ exempts banks from all liability, in 1991 the American Bankers Association estimated that 15% of banks had forfeited securities that entailed excessive risks, while 45% of banks simply refused to lend where there were environmental risks.⁽¹⁴⁾ It is certain that in the Canadian context, where liability is poorly shared, lenders will be extremely careful and even more hesitant than the Americans to invest in such cases.

A compromise must be found if Canadian industries with high environmental risks are not to be harmed and Canada's financial industry unbalanced. Otherwise, Canada's ability to compete with other countries on the world market could be seriously jeopardized. Canadians would then face a paradox: by wanting to protect the environmental capital of future generations, they would be mortgaging the country's economic growth and thus harming those very generations.

(12) Helen K. Sinclair, "The Regulatory Context: Has a Barrier to New Avenues Been Lifted?," *Canadian Banker*, Volume 19, Number 4, July/August 1992, p. 6.

(13) The Superfund is an environmental fund set up in 1980. Large polluting businesses contribute through taxes to this pool, which makes it possible to share environmental risks. The money thus accumulated is used to clean up the most polluted sites. The cost of cleaning up the 1,200 identified sites has been estimated at \$500 billion. The fund recovers the amounts spent by prosecuting the owners, with the exception of banks.

(14) John Lorinc (1992), p. 34.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This section also covers the need for regular audits and the role of internal controls in preventing errors and fraud.

The second part of the document provides a detailed overview of the accounting cycle. It outlines the ten steps involved in the process, from identifying the transaction to closing the books. Each step is explained in detail, with examples provided to illustrate the correct application of the principles.

The third part of the document discusses the various types of accounts used in accounting. It categorizes them into assets, liabilities, equity, revenue, and expense accounts. Each category is further divided into sub-accounts, and the document explains how these accounts are used to track the financial performance of the organization.

The final part of the document provides a summary of the key points discussed throughout the document. It reiterates the importance of accuracy, consistency, and transparency in accounting practices. It also offers some final thoughts on the role of accounting in the overall success of a business.



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